

Abstract

An integrated circuit for processing communication packets having separate data buffers and separate state information buffers. Each data buffer and each state information buffer (hereinafter termed resources) has an associated in-use counter. Multiple events can share the same resource. The counter associated with a resource is incremented when a resource becomes associated with a particular event. The counter associated with a resource is decremented when an event completes the use of that particular resource. When the in-use counter for a resource becomes zero, the in-use counter indicates that the resource is unassigned and that the resource can be assigned to a new event.

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